

**California Content Standards**

*This lecture, “Waves in Nature: Lasers to Tsunamis and Beyond” supports the following standards:*

**6th Grade Physical Sciences: Heat -Thermal Energy**

Students know energy can be carried from one place to another by heat flow or by waves, including water, light and sound waves, or by moving objects.

**High School Physics: Waves –**

Waves have characteristic properties that do not depend on the type of wave. As a basis for understanding this concept:

- Students know waves carry energy from one place to another.
- Students know radio waves, light, and X-rays are different wavelength bands in the spectrum of electromagnetic waves whose speed in a vacuum is approximately  $3 \times 10^8$  m/s (186,000 miles/second).

**Investigation and Experimentation:**

Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept, and to address the content of the other four strands, students should develop their own questions and perform investigations.